I claim:

1. A method for enabling timing and sync signals for use in individual communications units of a multiple unit system, the individual units being connected together in a series system having first and second end units and a variable number of intermediate units, the
5 method comprising the steps of:

 a) identifying each of the communications unit as either an end unit or a non-end unit;

 b) assigning an identifer to each of the end units;

 c) comparing the identifiers assigned and reassigning identifiers if they are the same; and

10 d) generating the timing and sync signals by the end unit having a particular identification code and passing the signals to the other individual units of the system.

2. The method of claim 1 wherein the communication units are identified as an end or non-end unit by consideration of internally generated signals.
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3. The method of claim 2 wherein the internally generated signal are LOS signals.

4. The method of claim 3 wherein the presence of two LOS signals indicates a non-end unit and the presence of a single LOS signal designates an end unit.
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5. The method of claim 2 wherein the identifier is assigned in a random manner.

6. The method of claim 5 wherein the identifier is one of two possible values.

7. The method of claim 2 or claim 5 wherein the step of comparing the identifiers comprises the steps of passing the identifier associated with each of the end unit to the other end unit and comparing the codes at each end unit.

5 8. The method of claim 7 further comprising the step of randomly reassigning an identifier to each of the end units if the identifiers are the same.

9. The method of claim 2 wherein the step of generating system timing codes comprises enabling a free-run oscillator in the communications unit having the particular identifier.

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10. The method of claim 1 wherein steps a through d are performed in a continuing manner to accommodate changes in the number of communications units in the series system.

11. The method of claim 1 wherein the communications units are coupled together

15 with a master-slave relationship between framers in coupled units, comprising the additional step of determining the configuration of each coupled end of each communication unit by referencing the presence of end or non-end identification and the presence or non-presence of an identification code for each communications unit.

20 12. A method for forcing an outcome choice between competing devices coupled together in a network, comprising the steps of:

assigning a value to each of the competing devices;

comparing the values and reassigning the values for all of the competing devices until the values are different; and

25 choosing one of the values and designating the competing device having the chosen value as the chosen unit.

13.   The method of claim 10 wherein each value is assigned to each competing device randomly.

5   14.   The method of claim 11 wherein the number of available values to be assigned to the competing devices is equal to the number of competing devices.

15.   The method of claim 12 wherein the steps of the method are performed on a continuing basis to accommodate changes to the number of competing devices in the network.

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